

Claims

What is claimed is:

1. A system for passing communications between a manufacturer and a

5 manufacturer's customer, the system comprising:

a customer interface for passing communications to and from a customer,

an application server in communication with said customer interface comprising
an application level protocol for receiving customer communications from the customer
interface and, in response to said customer communication, generating a message,

10 a client interface in communication with said application server for passing
messages to and from said application server, and

a remote back-office database server coupled to said client interface, the back-
office database server providing access to data which is desired by the customer.

15 2. The system of claim 1, wherein the data is in the form of representations of a
plurality of business documents, the system further comprising:

means for relating the plurality of business documents according to a previously
established progression, the previously established progression defining the
relationships between different types of business documents as they are encountered
20 in a typical business environment and defining allowed navigation paths between the
plurality of business documents,

means for displaying the previously established progression as a hierarchical tree structure of representations of business documents, the tree structure having at least one branch, wherein:

the tree structure has a plurality of levels in a hierarchy, each level being
5 in a dominant-subordinate relationship with each adjacent level,

at least two levels in the same branch comprise at least one document type node and at least one document instance node,

the document type nodes in at least two different levels in the same tree branch identify different types of business documents,

each document instance node is:

- (a) immediately subordinate to a document type node,
- (b) associated with a representation of the same type of business document as a document instance node in the same level of the same branch, and
- (c) associated with a representation of a business document that is
15 related to a representation of a business document associated with a document instance node in another level in the same branch;

means for selecting a particular document instance node; and

means for displaying information contained in the representation of a business document associated with a selected document instance node.

20

3. The system of claim 1, wherein the back-office database server comprises a means for accessing data used by an enterprise resource planning program.

4. The system of claim 3, wherein the application server comprises:
means for accepting from a customer, customer specific criteria for a make to
order item.

5 5. The system of claim 4, further comprising a computer assisted drawing program.

6. The system of claim 3, wherein the application level protocol comprises a simple
object access protocol.

7. The system of claim 6, wherein the messages passed to and from said
application server are in the form of extensible markup language documents.

8. A method of exchanging information in a manufacturing environment between a
manufacturer and a customer, comprising the steps of:

initiating a logical session between a customer and an application server,

receiving from a customer a request for information,

processing the request for information from the customer,

transmitting the processed request for information to a remote back-office

database server,

receiving information from the back-office database server, and

transmitting to the customer the information received.

9. The method of claim 8, further comprising the step of providing an enterprise resource planning program accessible through the remote back-office database server.

10. The method of claim 9, further comprising the step of providing:

5 representations of a plurality of business documents accessible through the back-office server;

means for relating the plurality of business documents;

means for displaying a hierarchical tree structure of representations of business documents, the tree structure having at least one branch, wherein:

10 the tree structure has a plurality of levels in a hierarchy, each level being in a dominant-subordinate relationship with each adjacent level,

at least two levels in the same branch comprise at least one document type node and at least one document instance node,

the document type nodes in at least two different levels in the same tree branch identify different types of business documents,

each document instance node is:

(a) immediately subordinate to a document type node,

(b) associated with a representation of the same type of business document as a document instance node in the same level of the same branch, and

20 (c) associated with a representation of a business document that is related to a representation of a business document associated with a document instance node in another level in the same branch;

means for selecting a particular document instance node; and

means for displaying information contained in the representation of a business document associated with a selected document instance node; and the step of receiving from a customer, a request for information, comprises the steps of:

selecting a first of the at least two document instance nodes that is in a level dominant the level of a second of the at least two document instance nodes, such that information associated with the first document instance node is displayed, and

selecting the second of the at least two document instance nodes which is in a level subordinate to the first of at least two document instance nodes, such that information associated with the second document instance node is displayed.

11. The method of claim 8, further comprising the steps of:

providing access to representations of at least first and second different business documents of differing types through the back-office database server, said representations being related by a common key,

displaying, for the first and second representations of business documents, a dominant reference and a subordinate reference to the first and second representations of business documents in a manner that shows the dominant-subordinate relationship between the two references,

providing a document information display area

selecting the dominant reference,

displaying information from the first business document in the information display area,

selecting the subordinate reference,

displaying information from the second business document in the information display area.

12. The method of claim 8, wherein the step of processing the request for

5 information from the customer comprises the steps of:

generating an extensible markup language document,

passing the extensible markup language document to a selector component,

processing header information on the extensible markup language document,

and

passing the extensible markup language document to an adapter component,

and wherein the step of transmitting the processed request for information to a remote

back-office database server comprises the steps of:

invoking an RPC to a remote database system through a proxy object, and

invoking an ISAPI component to pass the extensible markup language document

15 to an integration component.